

**STUDY OF MAINE
UNDERGROUND STORAGE
SYSTEM
ANNUAL INSPECTION REPORTS**

for

Maine Department of Environmental Protection

by

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Background

The storage of petroleum products in underground tanks (UST) can present a serious threat to ground water quality. In the past fifteen years, the state of Maine has undertaken an ambitious program to reduce this threat. During the course of this program, the storage system population statewide has been reduced from approximately 42,000 tanks to 6,000. Almost all storage systems in use in the middle 80's have been replaced with new storage systems. Since 1991, all new or replacement storage systems have been equipped with secondary containment and continuous electronic leak detection. Clearly, the environmental threat posed by leaks and spills from underground storage systems has been dramatically reduced.

However, the underground environment can be hostile to buried equipment. Freeze/thaw cycles, winter to summer temperature variations, ground water and surface water infiltration, road salt and power surges, are among the factors that can cause underground equipment to have a relatively short life expectancy. This problem is exacerbated by the fact that most of this equipment is normally hidden from view and malfunctioning equipment may give no indication that a problem exists until an investigation of a leak or spill reveals the problem.

Reliable operation of leak detection, spill prevention, corrosion protection and safety equipment installed on underground tanks is essential to long term public safety and environmental protection. Maine's underground storage system regulations include a requirement that all operating storage systems must be inspected on an annual basis by a qualified person. The purpose of the inspection is to establish that all equipment required by regulations is correctly installed and functioning properly.

An inspection report form is mailed annually to the owners of all active storage systems in the Maine Department of Environmental Protection (DEP) data base. The DEP encourages storage system owners to voluntarily return completed inspection reports, but there is no regulatory requirement that inspection reports be filed with the DEP. As a result, there is little reliable information concerning the operational status of storage systems in Maine. In addition, enforcement of the annual inspection requirement is labor intensive because storage systems that are not being inspected annually are not readily identifiable.

Purpose of This Study

The purpose of this study is to answer the following questions:

What percentage of UST systems are inspected annually?

What percentage of annual inspection records are voluntarily submitted to the DEP?

What percentage of UST annual inspections discover problems?

What types of problems are discovered during annual inspections?

Are problems discovered during annual inspections repaired?

Based on the answers to these questions, the study is to evaluate:

Whether the annual inspection program contributes significantly to the proper operation of UST systems.

Whether modifications to the annual inspection program should be made to improve its effectiveness.

Methodology

The methodology for the study was to randomly select and review the annual inspection reports completed in calendar year 1999 for 10 percent of the active UST facilities in Maine. Annual inspection reports were gathered from DEP files or requested from the UST owners. Information from the reports was summarized in table form to answer the questions posed above. Information concerning the time delay between the annual inspection and any repair activity was gathered by contacting by telephone the person who had conducted the annual inspection.

A random number generator was used to select from the DEP data base of active facilities a representative sample of 10 percent of the UST facilities in Maine. This procedure resulted in the selection of 292 facilities. Of this number, twelve facilities were subsequently eliminated because they had legitimate reasons for not having an annual inspection (facility not yet one year old, new owner with no prior paperwork, tank out of service, etc.) and 18 facilities were eliminated because DEP personnel were unable to confirm whether an inspection had been conducted within the time frame required by this study. This resulted in a final usable sample of 262 facilities.

A search of DEP files revealed that 53 annual inspection reports from the selected facilities had been voluntarily submitted to the DEP. Mail and telephone contacts by the DEP with the UST owners who had not voluntarily submitted reports resulted in the acquisition of an additional 137 annual inspection reports, for a total of 190 valid inspection reports reviewed for the study. For the remaining 72 facilities, the DEP determined that 52 facilities had not been inspected in 1999, 8 facilities were reportedly inspected but the paperwork could not be located, and 12 facilities were inspected by unqualified personnel. These data are summarized in the following table:

| | |
|---|------|
| Original sample (10% of active facilities) | 292 |
| New facility, new owner, out of service, etc. | - 12 |
| Could not confirm inspection | - 18 |
| <hr/> | |
| Total usable facilities for study | 262 |
| No inspection conducted in 1999 | - 52 |
| No inspection report available | - 8 |
| Inspector not qualified | - 12 |
| <hr/> | |
| Total inspection reports reviewed | 190 |

Information from the inspection reports was reviewed and summarized in an Excel spreadsheet. The full data table is presented in Appendix A. General information contained in the spreadsheet included the facility name, the facility registration number, the facility use, and whether a problem was recorded on the inspection report. Problems were classified as tank probe, piping probe, line leak detector, drop tube, spill bucket, overfill device, crash valve, tank cathodic protection and piping cathodic protection. For each problem type, separate columns were provided to indicate whether a problem was observed, whether the problem was repaired, and how many months after the annual inspection the repair was completed. A comment column was also provided to permit further description of problems noted. Refer to Appendix A for a more complete description of the spreadsheet contents.

Problems noted on the annual inspection were not always completely described by the inspector. In some cases, interpretation of the information based on the reviewer's knowledge and experience was required in order to classify the problem described on the spreadsheet.

Presentation and Discussion of Data

Data from the spreadsheet were tallied and are graphically presented in Figures 1 through 7. To facilitate reading of the report, the discussion of data is presented on the page facing each of the figures.

Figure 1. What Were the Facility Types Included in the Study?

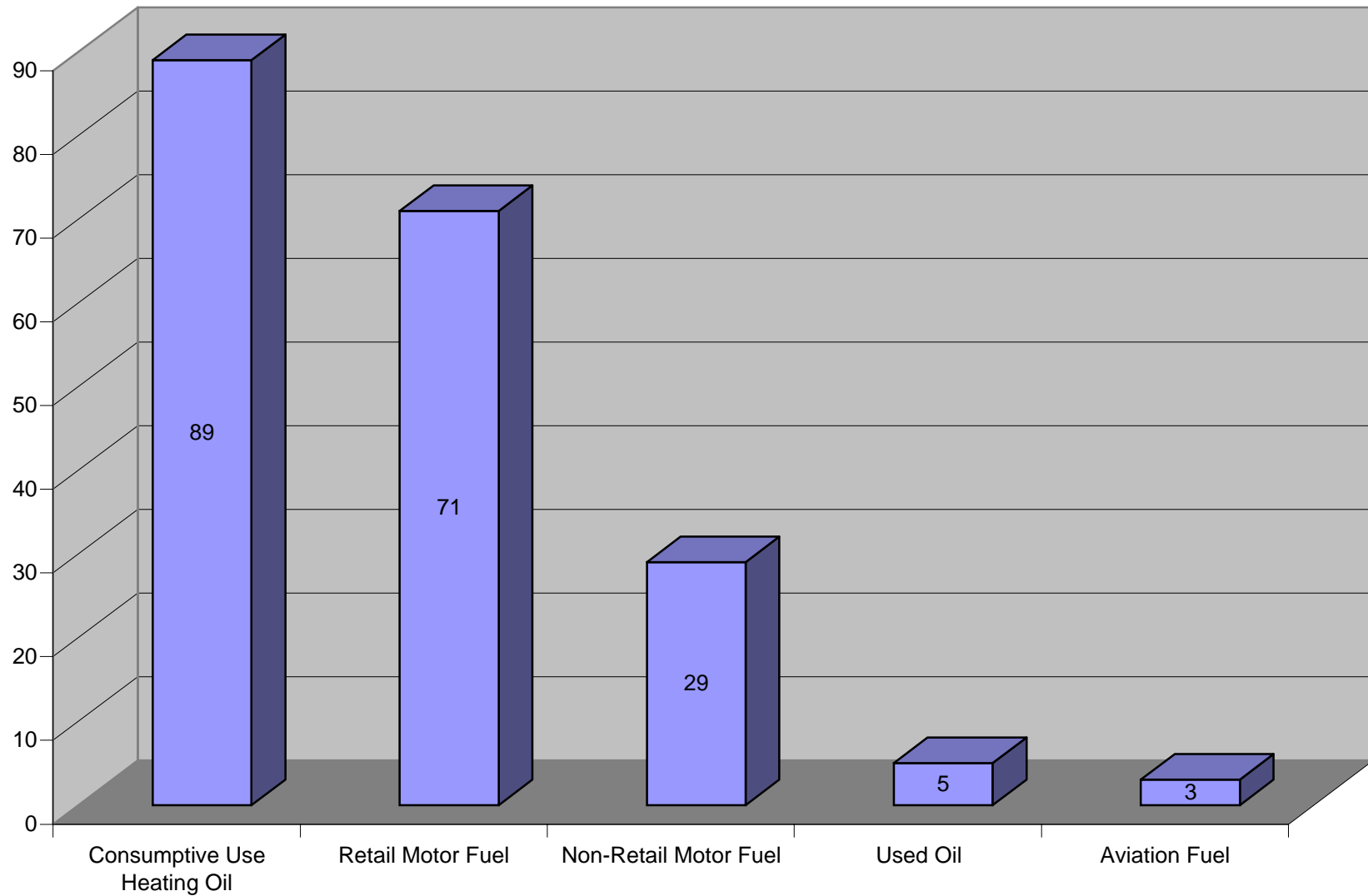


Figure 1. What Were the Facility Types Included in the Study?

| Facility Type | Number | Percent |
|-----------------------------|--------|---------|
| Consumptive use heating oil | 89 | 45 |
| Retail motor fuel | 71 | 36 |
| Non-retail motor fuel | 29 | 15 |
| Used oil | 5 | 3 |
| Aviation fuel | 3 | 1 |
| TOTAL | 197 | 100 |

Figure 1 and the table above were calculated based on the 190 facilities where annual inspection reports were analyzed. The total number of facility uses is greater than 190 because some facilities had multiple uses.

The facility use categories contained in the DEP data base differ from the categories used in this study, so the percentages in the table cannot be directly compared to the percentages present in the entire tank population data base.

Figure 2. What Percentage of UST Facilities Had a Valid Annual Inspection Conducted in 1999?

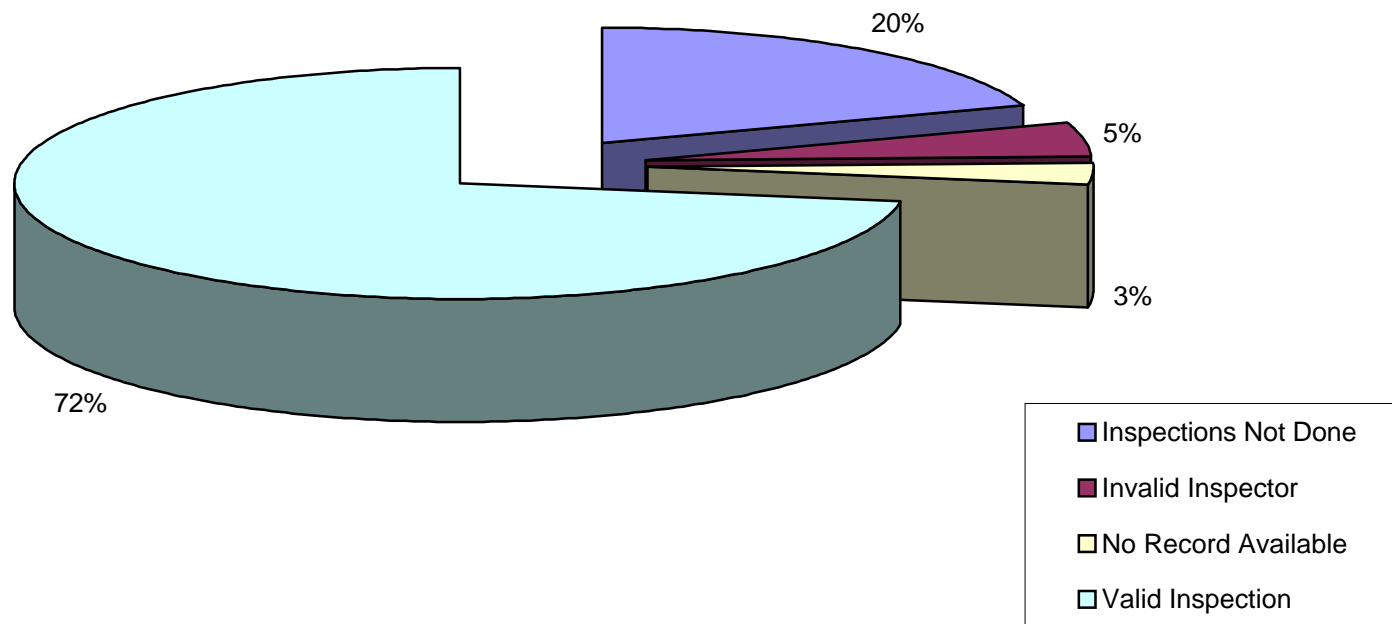


Figure 2. What Percentage of UST Facilities Had a Valid Annual Inspection Conducted in 1999?

| | Number | Percent |
|--|--------|---------|
| Valid Inspection | 190 | 72 |
| Inspection not conducted | 52 | 20 |
| Inspection conducted by unqualified person | 12 | 5 |
| No record of inspection available | 8 | 3 |
| TOTAL | 262 | 100 |

Of the 262 facilities in the study with usable data, 72 percent had conducted a valid inspection and another 3 percent indicated that an inspection had been conducted but were not able to produce any paper record of the inspection. Twenty percent of the facilities in the study acknowledged that no inspection had been conducted.

Five percent of the facilities had an annual inspection conducted by an unqualified person. Maine regulations specify that the inspection must be conducted by a Maine certified tank installer, a manufacturer trained representative of the owner or an authorized representative of the manufacturer. There were twelve facilities in the study sample where the person conducting the annual inspection did not fall in any of these three categories.

Figure 3. What Percentage of Facility Owners Voluntarily Sent in Their Annual Inspection Reports in 1999?

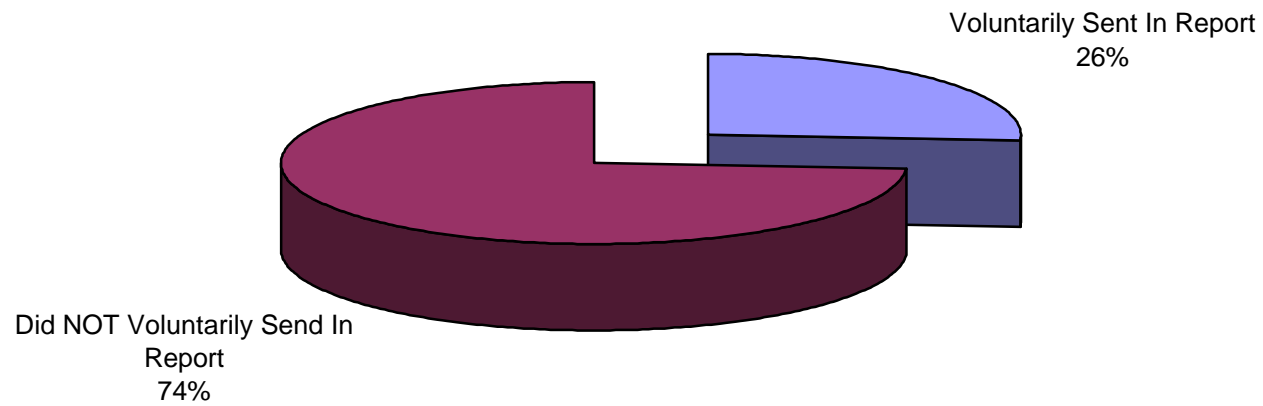


Figure 3. What Percentage of Facility Owners Voluntarily Sent in Their Annual Inspection Reports in 1999?

| | Number | Percent |
|--|--------|---------|
| Voluntarily sent in annual inspection report in 1999 | 53 | 26 |
| Did NOT voluntarily send in annual inspection report in 1999 | 149 | 74 |
| TOTAL | 202 | 100 |

Of the facilities included in this study, 202 facilities had inspection reports that could have been submitted to the DEP. This number includes 190 facilities with valid inspections and 12 facilities where inspections were conducted by unqualified inspectors (See Figure 2). For these 202 facilities, only 53 UST owners voluntarily sent in their annual inspection reports.

Because submission of the annual inspection report to the DEP is not required by regulation, most UST owners do not report the results of the annual inspection to the DEP. While the data show that many tank owners conduct the annual inspection even though they do not submit the report to the DEP (See Figure 2), the lack of information concerning the annual inspection makes it difficult for the DEP to identify facilities that were not inspected and to follow up on those facilities where problems are reported to see if the problems are remedied.

Figure 4. What Percentage of 1999 Annual Inspections Discovered Problems?

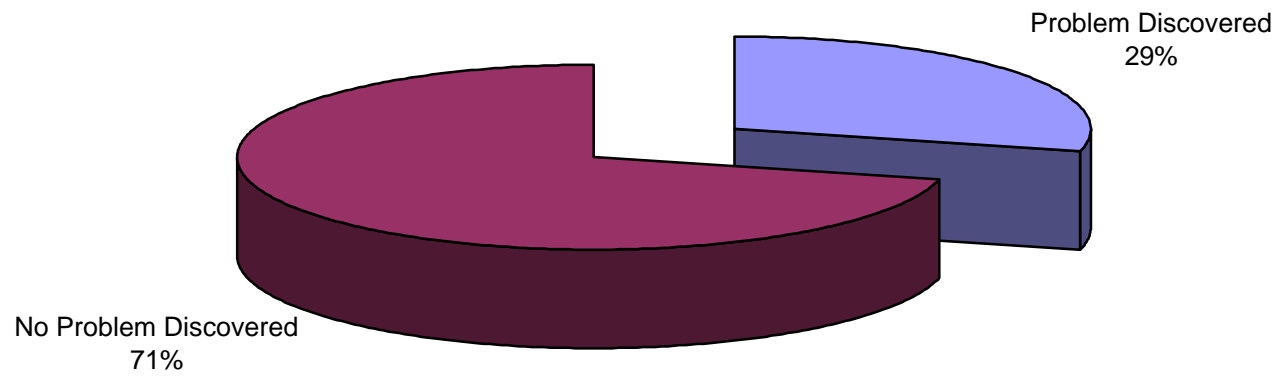


Figure 4. What Percentage of 1999 Annual Inspections Discovered Problems?

| | Number | Percent |
|-----------------------|--------|---------|
| Problem discovered | 55 | 29 |
| No problem discovered | 135 | 71 |
| TOTAL | 190 | 100 |

Of the 190 annual inspection reports reviewed, 29 percent discovered problems with the facility. This number is very likely an underestimate of the true number of problems because some problems are probably corrected during the inspection but are not recorded on the inspection report. Thus the 29 percent of facilities with problems discovered in 1999 is most likely a conservative estimate of the number of facilities where problems actually occurred.

Figure 5. What kinds of Problems Were Discovered During Annual Inspections in 1999?

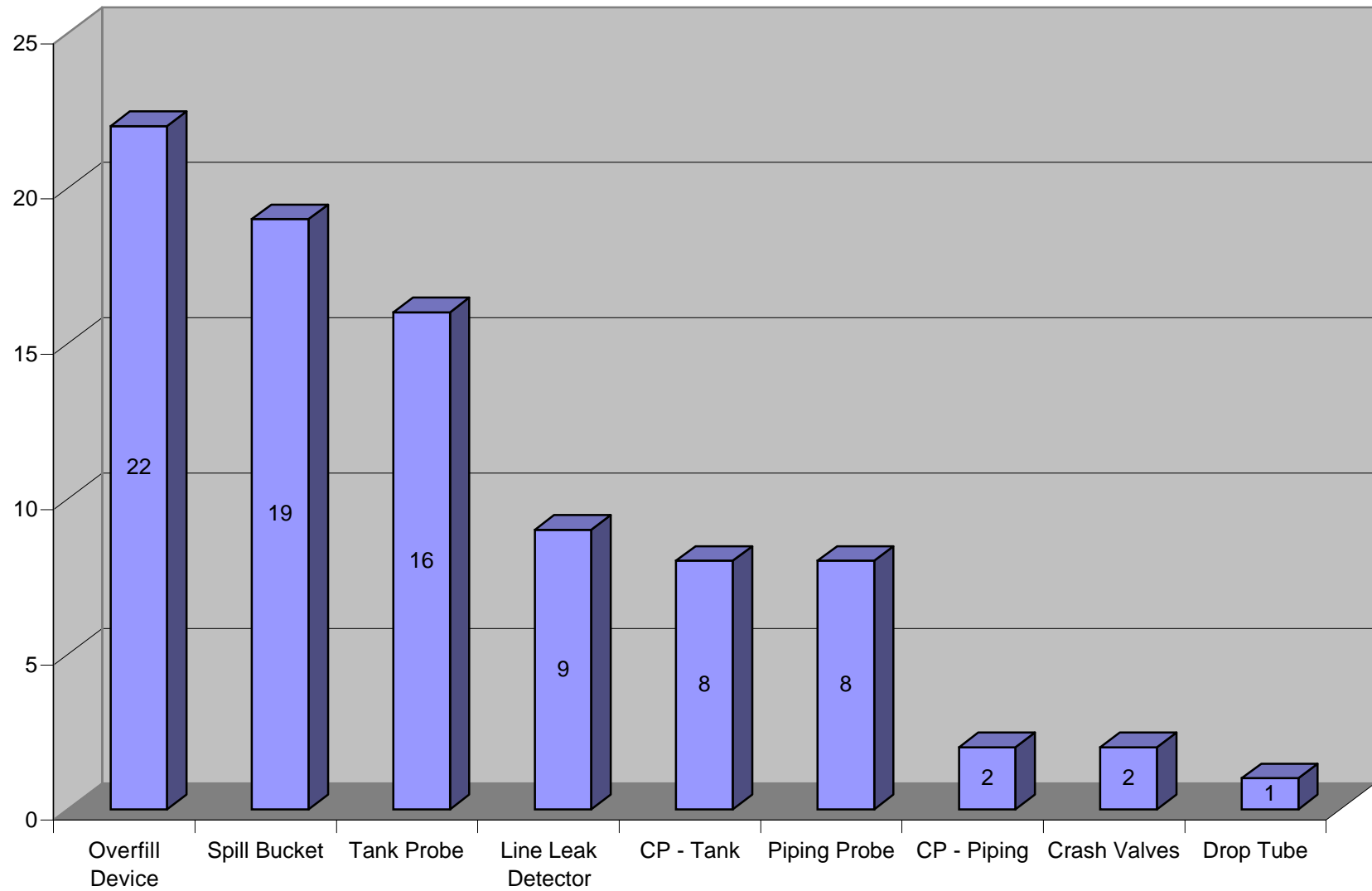


Figure 5. What Kinds of Problems Were Discovered During Annual Inspections in 1999?

| Type of Problem | Number of Problems Discovered | Percent of Problems Discovered | Number of Problems Remedied | Percent of Problems Remedied |
|-----------------------------|-------------------------------|--------------------------------|-----------------------------|------------------------------|
| Overfill device | 22 | 25 | 8 | 36 |
| Spill bucket | 19 | 22 | 17 | 89 |
| Tank leak detection probe | 16 | 19 | 10 | 63 |
| Line leak detector | 9 | 11 | 7 | 78 |
| Tank cathodic protection | 8 | 9 | - | - |
| Piping leak detection probe | 8 | 9 | 3 | 38 |
| Piping cathodic protection | 2 | 2 | - | - |
| Crash valve | 2 | 2 | 1 | 50 |
| Drop tube | 1 | 1 | 1 | 100 |
| TOTAL | 87 | 100 | 47 | |

A total of 87 separate problems were discovered at 55 of the facilities included in the 1999 sample of annual inspection reports. The types of problems that were identified for each problem category are described in Appendix B.

Figure 6. How Many Problems Identified During 1999 Annual Inspections Were Remedied?

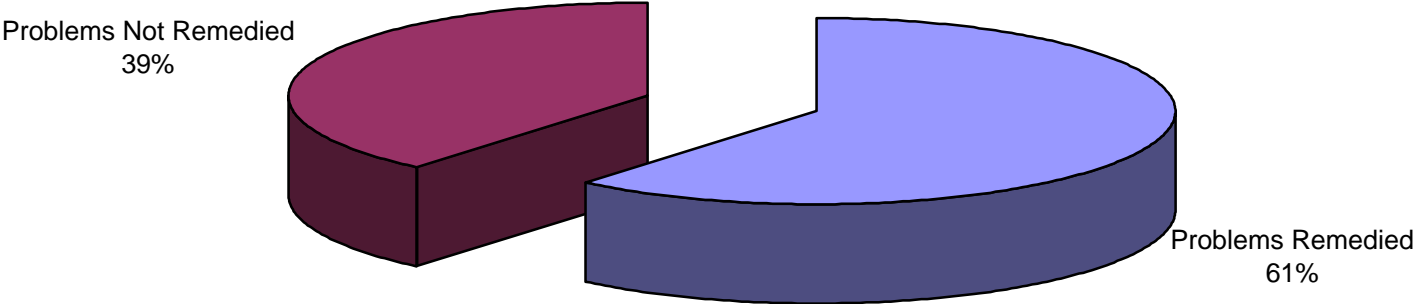


Figure 6. How Many Problems Identified During 1999 Annual Inspections Were Remedied?

| | Number | Percent |
|-----------------------|--------|---------|
| Problems remedied | 47 | 61 |
| Problems not remedied | 30 | 39 |
| TOTAL | 77 | 100 |

The status of the ten cathodic protection problems identified in the inspection reports was not determined as a part of this study. This is why the number of problems where the present day status of the problem is known (77) is different from the number of problems discovered (87). Of the 77 problems whose status is known, 47 (61%) were remedied and 30 (39%) were not remedied.

Figure 7. How Long Did It Take for Problems Identified in the 1999 Annual Inspection Reports to be Remedied?

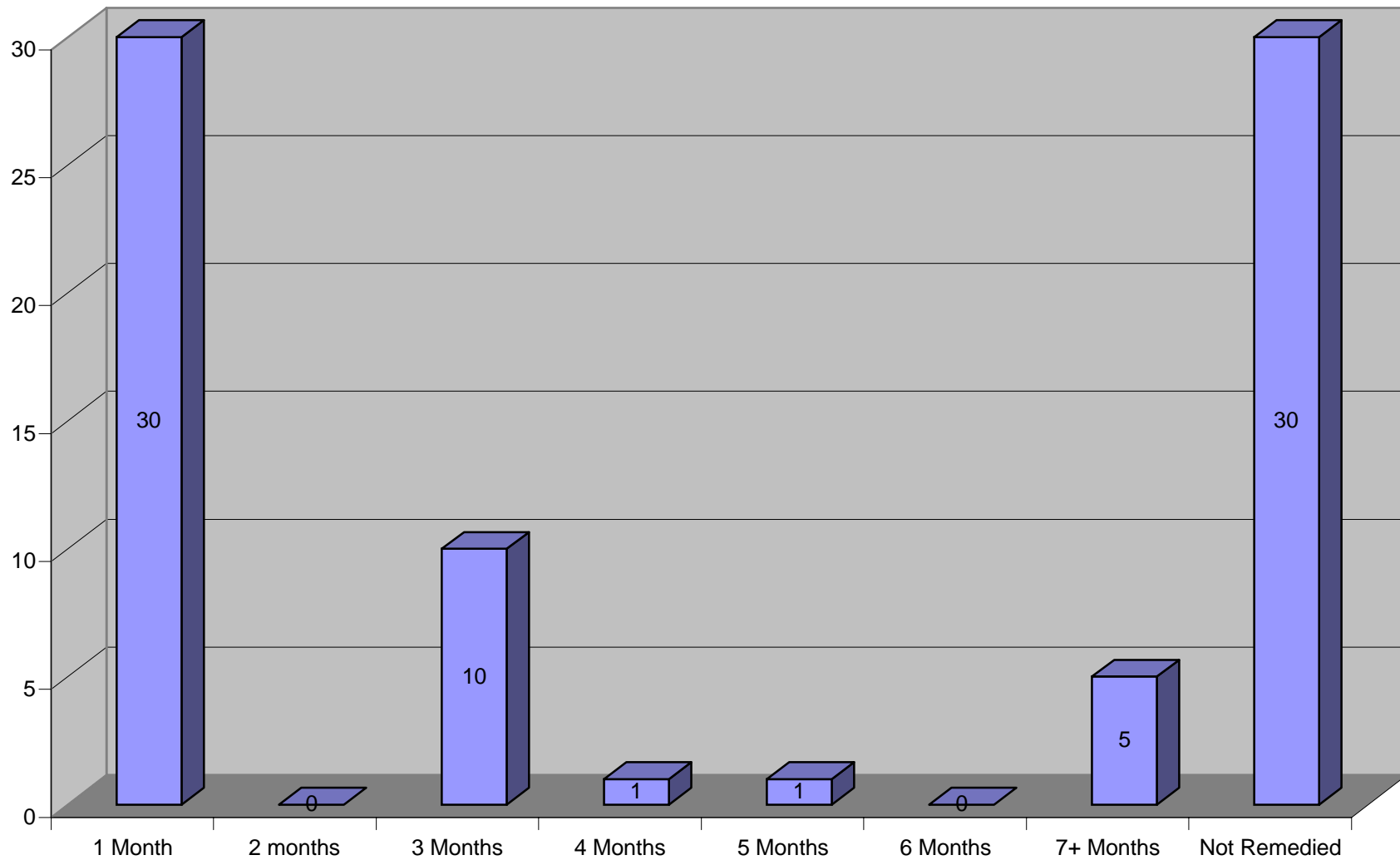


Figure 7. How Long Did It Take for Problems Identified in the 1999 Annual Inspection Reports to be Remedied?

| Time to Remedy | Number | Percent |
|------------------|--------|---------|
| 1 Month | 30 | 39 |
| 2 Months | 0 | 0 |
| 3 Months | 10 | 13 |
| 4 Months | 1 | 1 |
| 5 Months | 1 | 1 |
| 6 Months | 0 | 0 |
| 7 Months or more | 5 | 7 |
| Not remedied | 30 | 39 |
| TOTAL | 77 | 100 |

Of the problems identified during annual inspections in 1999, 30 (39%) were repaired within the first month. Most of these were probably repaired at the time of the inspection.

An additional 12 problems (16%) were remedied in the two to six months following the annual inspection. Five problems (7%) were remedied 7 months or more after the date of the annual inspection. Note that the date of repair is based on telephone interviews with the inspectors, and is dependent on the inspector's recollection. Thus there is likely some error in the estimated time to remedy a problem.

Telephone interviews with the persons who conducted the 1999 annual inspections in July of 2000 indicated that 30 (39%) of the problems identified had not yet been remedied. Inspectors indicated in several cases that the same problem had been present for several years but that the tank owner declined to correct the problem.

The status of the ten cathodic protection problems identified in the inspection reports was not determined as a part of this study. This is why the number of problems remedied (77) is different from the number of problems discovered (87).

Results

This study was intended to answer five basic questions concerning the UST annual inspection program.

What percentage of UST systems are inspected annually?

For the random sample of 262 UST facilities with usable data included in this study, 190 facilities (73%) had valid inspections conducted in 1999, and 73 facilities (27%) did NOT have valid inspections.

What percentage of annual inspection records are voluntarily submitted to the DEP?

For the 202 facilities where annual inspection reports were generated, 53 reports (26%) were voluntarily submitted to the DEP, while 149 reports (74%) were not submitted to the DEP.

What percentage of UST annual inspections discover problems?

For the 190 facilities with usable inspection data, problems were discovered at 55 facilities (29%). There were no reported problems at 135 facilities (71% of the study sample).

What types of problems are discovered during annual inspections?

A total of 87 problems were discovered at 55 different facilities. Problems can be categorized as follows:

| | |
|----------------------|----------|
| Spill/overflow | 41 (47%) |
| Leak detection | 32 (37%) |
| Corrosion protection | 10 (12%) |
| Miscellaneous | 3 (4%) |

Are problems discovered during annual inspections repaired?

Of the 77 problems whose status as of June 2000 is known, 47 (61%) were remedied and 30 (39%) were not remedied.

Discussion

Does the annual inspection program contribute significantly to the proper operation of UST systems?

Approximately one-quarter of UST facilities selected for this study did not have an annual inspection conducted in 1999. It is reasonable to assume that many of these facilities probably have not been inspected for several years. As a result, they are likely to exhibit an even higher number of equipment problems than the UST systems that are inspected on a regular basis.

Many of the problems identified seriously compromise the effectiveness of spill prevention and leak detection equipment. If these problems remain undetected, the long term effectiveness of the DEP regulations in preventing petroleum discharges from USTs would be seriously compromised.

Over one-third of problems that are discovered are not remedied. This too will compromise the long term effectiveness of the DEP regulations in preventing petroleum contamination from USTs. Again, because the DEP is not routinely notified of inspection results, the DEP cannot easily follow up on problems that need to be remedied.

The 29% of annual inspections that discovered problems is a conservative estimate of the number of problems present because it is likely that many problems are corrected at the time of the inspection and are not recorded on the inspection form. Even so, 29% is a significant percentage of facilities. If this 29% is extrapolated to the statewide population of approximately 3,000 facilities, some 870 facilities with problems would be identified each year. There is little doubt that the identification and (ideally) correction of this number of problems on an annual basis contribute significantly to the proper operation of UST systems.

Should modifications to the annual inspection program be made to improve its effectiveness?

The annual inspection program contributes significantly to the proper operation of important spill prevention and leak detection equipment installed on Maine's UST population. However, if the percentages described in this report are extrapolated to the statewide population, about 750 facilities (25 percent of 3000 UST facilities) are not inspected. About 217 (29%) of these facilities would be conservatively estimated to have about 347 problems (217×1.6 problems per facility) which remain undiscovered. For the approximately 2250 facilities that are inspected, about 1050 problems are discovered, but 400 of these are not remedied in a timely manner.

Clearly, the effectiveness of the annual inspection program could be increased if the percentage of inspections conducted and the percentage of problems remedied could be substantially increased. What is needed is an effective and efficient method for identifying non-compliant facilities and bringing them into compliance.

Increasing regulatory staff in conjunction with required submission of inspection reports to the DEP would probably identify facilities that were not being inspected. However, DEP enforcement mechanisms are lengthy and inefficient and not well suited to pursuing a large number of small violations.

Involving the private sector in achieving regulatory program goals has been a factor in Maine's UST program since its inception. Maine's certification program for UST workers, the first state level

program of its kind to be established in the nation, relies heavily on UST workers to follow regulations as a condition of their certification.

From a national perspective, many states enlisted the aid of fuel delivery personnel in enforcement of UST upgrading requirements by prohibiting fuel deliveries to UST facilities that had not met regulatory deadlines. Many states have found that this was a very effective and economical way to encourage compliance with regulations.

With a few program changes, it should be possible to improve the effectiveness of the annual inspection program by enlisting certified tank workers and fuel delivery personnel in the effort. The suggested model would work like this:

A qualified person would conduct an annual inspection as in the past, but the inspection process would include a certification by the inspector that equipment at the facility was properly installed and operational. This certification would be completed and provided to the UST owner ONLY after all necessary repairs had been accomplished.

Upon receipt of the certification of operation, the UST owner would forward the certificate to the DEP. Upon receipt of a properly completed certificate, the DEP would provide the UST owner with some form of label or tag that could be attached to the storage system fill pipe (or prominently displayed elsewhere at the facility) and would be readily visible to delivery personnel.

After a certain date, it would be illegal to deliver fuel into any storage tank that did not display a tag or label indicating that an inspection had been successfully completed. The status of all UST facilities could be displayed on a DEP internet site so that fuel delivery companies could easily verify the compliance status of their customers.

While there are certainly logistical and political issues beyond the scope of this study that must be worked out to implement such a program, many other states have established similar programs with some success.

Recommendations

Specific recommendations to assist in establishing the program outlined above are as follows:

- 1) Add a certification page or section to the annual inspection report form that already exists. This certification would only be signed when the inspector is satisfied that all required equipment is correctly installed and operating properly.
- 2) The DEP annual inspection report form should be revised and clarified to encourage consistency among inspectors and to ensure that the work is being conducted according to DEP specifications. The form should record problems that are corrected so that it would be possible to track the performance of different types of equipment over time. Once a new form

is published, old forms should be discontinued and not accepted as valid inspection reports. Perhaps the form and accompanying instructions could be made available on the DEP web site. The web site could also become a forum for frequently asked questions concerning inspection matters and how to resolve them. Periodic training should be provided to inspectors to ensure consistency among inspectors and discuss problems.

- 3) Regulations should be amended to require that an annual certificate of proper operation be submitted to the DEP. The DEP would then provide the UST owner with some form of identification tag or label that would be affixed to the storage system fill pipe or readily visible at the facility. Subsequent to the initial year of implementation, inspections would be required to be conducted at least one month (or other appropriate time) before the expiration of the identification tag to allow time for repairs to be done. A rule change would also be required to prohibit fuel deliveries into storage tanks that lacked the proper label or tag. There should be provisions for temporary tags to be provided by the DEP in special cases where problems cannot be corrected prior to the expiration of the identification tag.

Acknowledgements

The DEP and Marcel Moreau Associates would like to thank all of the tank owners, UST inspectors and DEP staff who supplied the information required to complete this study.

Special thanks is due to Becky Maddox, DEP summer intern, who contacted over 150 tank owners to obtain copies of their 1999 annual UST system inspection reports.

Appendix A

Data Summary Spreadsheet

Description of Spreadsheet Contents

ID

An arbitrary, sequential number assigned to a facility for this study.

Reg

The registration number assigned to the facility by the DEP and used to identify the facility in the DEP data base.

Facility Name

A brief text description of the facility.

Facility Use

Facility code letter used to describe the type of facility. The meaning of the code letters is as follows:

- A - Retail motor fuel dispensing facility
- B - Non-retail motor fuel dispensing facility (school, public works, etc.)
- C - Consumptive use heating oil
- D - Emergency generator
- E - Used oil
- F - Aircraft fueling facility

Problem Observed

Used to track facilities where a problem was discovered during the annual inspection. A “0” indicates that there was no problem, a “1” indicates that there was a problem.

Tank Probe

The tank probe is a leak detection sensor that indicates whether a double-walled storage tank is experiencing a possible leak. A “1” in the “Prob.” column indicates that a problem concerning the tank leak detection probe was observed. A “1” in the “Fixed” column indicates that the problem was remedied, a “0” indicates that it was not. The “Time” column records the number of months elapsed between the annual inspection and the repair of the problem. A problem that was remedied at the time of the inspection is recorded as a “1”.

Piping Probe

The piping probe is a leak detection sensor that indicates whether a double walled piping system is experiencing a possible leak. A “1” in the “Prob.” column indicates that a problem concerning the piping leak detection probe was observed. A “1” in the “Fixed” column indicates that the problem was remedied, a “0” indicates that it was not. The “Time” column records the number of months elapsed between the annual inspection and the repair of the problem. A problem that was remedied at the time of the inspection is recorded as a “1”.

LLD (Line Leak Detector)

The line leak detector is a device that detects major leaks in pressurized pumping systems. A “1” in the “Prob.” column indicates that a problem concerning the line leak detector was observed. A “1” in the “Fixed” column indicates that the problem was remedied, a “0” indicates that it was not. The “Time” column records the number of months elapsed between the annual inspection and the repair of the problem. A problem that was remedied at the time of the inspection is recorded as a “1”.

Drop Tube

The drop tube is an extension of the fill pipe that reduces vapor emissions in gasoline tanks. Some overfill devices are incorporated into drop tubes, so drop tubes are sometimes installed in heating oil or diesel tanks. A “1” in the “Prob.” column indicates that a problem concerning the drop tube was observed. A “1” in the “Fixed” column indicates that the problem was remedied, a “0” indicates that it was not. The “Time” column records the number of months elapsed between the annual inspection and the repair of the problem. A problem that was remedied at the time of the inspection is recorded as a “1”.

Spill Bucket (Spill Containment Manhole)

Spill containment manholes are intended to capture small spills that may occur when the delivery hose is disconnected from the tank fill pipe. A “1” in the “Prob.” column indicates that a problem concerning the spill containment manhole was observed. A “1” in the “Fixed” column indicates that the problem was remedied, a “0” indicates that it was not. The “Time” column records the number of months elapsed between the annual inspection and the repair of the problem. A problem that was remedied at the time of the inspection is recorded as a “1”.

Overfill Device

Overfill devices are designed to prevent the tank from being filled beyond its capacity during a delivery. A “1” in the “Prob.” column indicates that a problem concerning the overfill device was observed. A “1” in the “Fixed” column indicates that the problem was remedied, a “0” indicates that it was not. The “Time” column records the number of months elapsed between the annual inspection and the repair of the problem. A problem that was remedied at the time of the inspection is recorded as a “1”. The “Unk.” (unknown) column was used to track those facilities where the operation of the overfill prevention device could not be verified because the device was inaccessible or not testable.

Crash Valve

Crash valves are installed at the base of dispensers equipped with pressurized pumps to automatically shut-off the flow of fuel to the dispenser in case of fire or substantial impact to the dispenser. A “1” in the “Prob.” column indicates that a problem concerning the crash valve was observed. A “1” in the “Fixed” column indicates that the problem was remedied, a “0” indicates that it was not. The “Time” column records the number of months elapsed between the annual inspection and the repair of the problem. A problem

that was remedied at the time of the inspection is recorded as a “1”.

CP (Cathodic Protection) Tank

Steel tanks are required to have cathodic protection to provide protection against corrosion. A “1” in the “Pres” column indicates that cathodic protection of the tank was present, a “0” indicates that cathodic protection was not present. A “1” in the “Prob” column indicates that a problem was present, a “0” indicates that a problem with the cathodic protection was not observed. This study did not track whether cathodic protection problems were remedied.

CP (Cathodic Protection) Piping

Buried steel piping containing petroleum is required to have cathodic protection to provide protection against corrosion. A “1” in the “Pres” column indicates that cathodic protection of the piping was present, a “0” indicates that cathodic protection was not present. A “1” in the “Prob” column indicates that a problem was present, a “0” indicates that a problem with the cathodic protection was not observed. This study did not track whether cathodic protection problems were remedied.

Comments

Where appropriate, the comments column was used to record specific details about the facility, the type of problem(s) observed at the facility, or the nature of the repair work conducted.

AnnualIn.xls

| ID # | Reg. # | Facility Name | Facility Use | Problem Obs. | Tank Probe | | | Piping Probe | | | LLD | | | Drop Tube | | | Spill Bucket | | | Overfill Device | | | | Crash Valves | | | CP Tank | | CP Piping | | Comments |
|------|--------|-----------------------------|--------------|--------------|------------|-------|------|--------------|-------|------|-------|-------|------|-----------|-------|------|--------------|-------|------|-----------------|-------|------|------|--------------|-------|------|---------|------|-----------|------|------------------------------|
| | | | | | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Unk. | Prob. | Fixed | Time | Pres | Prob | Pres | Prob | |
| 1 | 2140 | Nav. Sec. Group - Various | C | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 2 | 4260 | Westbrook Treatment Plant | C | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 3 | 1082 | Herman General Store | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 4 | 16930 | Gail Kennedy Home-Bangor | C | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 5 | 13192 | Bar Harbor Bank | C | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 6 | 19495 | Doc's Place - Houlton | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 7 | 6741 | South Paris Irving | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 8 | 13771 | Mid Coast Hospital - Bath | C | 1 | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 0 | | 0 | | electric overfill not tested |
| 9 | 11048 | City of Belfast - WWTP | C | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 10 | 9465 | Landry's Quik Stop-Greene | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 11 | 6349 | Athens Elementary School | C | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 12 | 5213 | Galusha's Inc. - Clinton | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 13 | 3070 | Smithfield Store | A | 0 | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 0 | | | |
| 14 | 3587 | Getty - Wiscasset | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 1 | 0 | |
| 15 | 13229 | Getty - So. Portland | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 16 | 2799 | Standish Mobil | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 17 | 7825 | CMP - Lewiston | C | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 18 | 13368 | Irving-Stillwater Ave Orono | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 19 | 14267 | Irving - Hamlin | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 0 | |
| 20 | 17708 | Irving-Rockland Somerset | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 21 | 10475 | Irving - Waldoboro | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 22 | 5455 | Irving - Main St. Houlton | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 23 | 4478 | Irving - Solon Superette | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 24 | 8881 | Robinsons Mobil-Sangerville | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 25 | 14642 | Big Apple - Congress, Port. | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 0 | | |

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| ID # | Reg. # | Facility Name | Facility Use | Problem Obs. | Tank Probe | | | Piping Probe | | | LLD | | | Drop Tube | | | Spill Bucket | | | Overfill Device | | | | Crash Valves | | | CP | Tank | CP | Piping | Comments |
|------|--------|-----------------------------|--------------|--------------|------------|-------|------|--------------|-------|------|-------|-------|------|-----------|-------|------|--------------|-------|------|-----------------|-------|------|------|--------------|-------|------|------|------|------------------------------|-----------------------------|----------|
| | | | | | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Unk. | Prob. | Fixed | Time | Pres | Prob | Pres | Prob | |
| 26 | 5327 | CN Brown - Dexter | A | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 0 | | | | |
| 27 | 4971 | Woolwich Clipper Mart | A | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 28 | 7228 | CB Kenworth-So. Portland | E | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 29 | 936 | Thompson Variety - Waldo | A | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 30 | 7090 | J&S Oil Co. - Winslow | A | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 0 | | | |
| 31 | 8211 | Jewett School - Bucksport | C | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 32 | 9045 | CFI - Topsham | A | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 33 | 9065 | CFI - Pine St. Portland | A | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 34 | 9055 | CFI - Kennebunk | A | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 35 | 10707 | York Co. Alcoholic Center | C | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | tank new & not in service | | |
| 36 | 14350 | Wing's Tank & Tummy | A | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 37 | 16017 | Stanhope Grocery-Jonespt. | A | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 0 | | | | |
| 38 | 10045 | BNAS - Brunswick | B, C | 1 | 1 | 1 | 3 | | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 0 | interstitial sensor replaced | | |
| 39 | 16117 | Georgia Pacific - Woodland | B | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 0 | | | | |
| 40 | 17075 | Park Square Station-Skow. | A | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 0 | | | | |
| 41 | 18041 | Presque Isle Nursing Home | C | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 42 | 18183 | Nav. Sec. Group-Winter Har | C | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 43 | 18253 | Cumb. Co. Jail - Portland | C | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 44 | 19015 | Brookline Elem. School | C | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 45 | 19208 | Livermore Falls H.S. | C | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 46 | 19591 | J&S Oil Co. - Manchester | A | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 47 | 793 | Patton Grammar School | C | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 0 | | | | |
| 48 | 2521 | J.P. Wentworth - Brooks | A | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 1 | 0 | | | |
| 49 | 5886 | Ames Store - Presque Isle | C | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 0 | | | |
| 50 | 11239 | Getty - Augusta | A | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 51 | 4117 | College Ave. Puffin-Waterv. | A | 1 | | | | | | | 1 | 1 | 1 | | | | | | | | | | | | | 0 | | 0 | | line leak detector replaced | |

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| ID # | Reg. # | Facility Name | Facility Use | Problem Obs. | Tank Probe | | | Piping Probe | | | LLD | | | Drop Tube | | | Spill Bucket | | | Overfill Device | | | | Crash Valves | | | CP Tank | | CP Piping | | Comments |
|------|--------|------------------------------|--------------|--------------|------------|-------|------|--------------|-------|------|-------|-------|------|-----------|-------|------|--------------|-------|------|-----------------|-------|------|------|--------------|-------|------|---------|------|-----------|------|-----------------------------|
| | | | | | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Unk. | Prob. | Fixed | Time | Pres | Prob | Pres | Prob | |
| 52 | 15321 | CMP - Farmington | C | 1 | | | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | | | | | 0 | | 0 | | 61SO & fill box replaced |
| 53 | 19402 | Newburgh Citgo | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 54 | 18853 | Howard's Market - Orland | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 55 | 8429 | South St. Mobil - Blue Hill | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 0 | | |
| 56 | 8070 | Wiscasset Municipal Bldg. | C | 1 | | | | 1 | 1 | 1 | | | | | | | 1 | 1 | 1 | | | | | | | | 0 | | 0 | | pipng sump sensor replaced |
| 57 | 143 | George Hall & Sons-Rockld | B | 0 | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 0 | | |
| 58 | 1140 | SAD #9 Bus Garage-Farm. | B | 1 | | | | | | | | | | 1 | 1 | 3 | | | | | 1 | 1 | 3 | | | | 1 | 0 | 0 | | drop tubes/61SO's installed |
| 59 | 13835 | Clark's - Bingham | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 0 | | |
| 60 | 14005 | Egg. Country Store-Sedgew | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 0 | |
| 61 | 10256 | Miller School - Waldoboro | C | 1 | | | | | | | | | | | | | | | | | | | | | | | 1 | | 0 | | CP not tested |
| 62 | 4904 | MDOT - Northport | B | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 63 | 5086 | MDOT - Presque Isle | B, C | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 64 | 9293 | MDOT - Scarborough | B, C | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 65 | 8830 | MDOT - Lagrange | B | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 66 | 9266 | MDOT - Moscow | B | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 67 | 7525 | MDOT - Springfield | B | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 68 | 9278 | MDOT - Waldoboro | B | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 69 | 8857 | MDOT - Gouldsboro | B | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 70 | 9303 | MDOT - Fort Fairfield | B | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 71 | 6486 | Lewiston Big Apple | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 72 | 9424 | Gorham Big Apple | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 73 | 9321 | Oxford Plaza Citgo | A | 1 | | | | | | | 1 | 1 | 1 | | | | | | | | | | | | | | 1 | 0 | 0 | | leak detector replaced |
| 74 | 15262 | Big Apple - Belfast | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 75 | 13039 | Awful Good Store-Ells. Falls | A | 1 | | | | | | | 1 | 1 | 1 | | | | | | | | | | | | | | 0 | | 0 | | leak detector replaced |
| 76 | 6214 | Christy's - Bangor | A | 1 | | | | | | | 1 | 1 | 1 | | | | | | | | | | | | | | 0 | | 0 | | leak detector replaced |

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| ID # | Reg. # | Facility Name | Facility Use | Problem Obs. | Tank Probe | | | Piping Probe | | | LLD | | | Drop Tube | | | Spill Bucket | | | Overfill Device | | | | Crash Valves | | | CP Tank | | CP Piping | | Comments |
|------|--------|-------------------------------|--------------|--------------|------------|-------|------|--------------|-------|------|-------|-------|------|-----------|-------|------|--------------|-------|------|-----------------|-------|------|------|--------------|-------|------|---------|------|-------------------------------|------|----------|
| | | | | | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Unk. | Prob. | Fixed | Time | Pres | Prob | Pres | Prob | |
| 77 | 2478 | Houlton Elem. School | C | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 78 | 5263 | York Town Hall | C | 1 | | | | 1 | 1 | 1 | | | | | | | | | | | | | | | 0 | | 0 | | piping sump sensor installed | | |
| 79 | 13090 | Jonesport Mobil | A | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 0 | | | | |
| 80 | 1775 | Wells Highway Dept. | B | 1 | | | | | | | | | | | | | | 1 | 0 | | | | | | 1 | 1 | 0 | | no overfill device | | |
| 81 | 4837 | Bridgton Citgo | A | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 0 | | | | |
| 82 | 410 | Darlings Honda | B, E | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 83 | 1858 | Country Corner's-Whitefield | A | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 84 | 1627 | Porteous - Orono | C | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 85 | 1573 | Maine Mac Inc. - Bangor | C, E | 1 | 1 | 1 | 3 | | | | | | | | | | | | | | | | | | 0 | | 0 | | insitu systems replaced | | |
| 86 | 829 | Caribou Middle School | C | 1 | | | | | | | | | | | | | | 1 | | | | 1 | | | 1 | 1 | 1 | 1 | cp not tested | | |
| 87 | 257 | Augusta Sanitary District | B | 1 | 1 | 1 | 1 | | | | | | | | | | | 1 | 1 | 3 | | | | | 0 | | 0 | | tank sensor/61SO installed | | |
| 88 | 63 | Pleasant Hill Nursing-Fairfld | C | 1 | 1 | 1 | 14 | | | | | | | | | | | 1 | 1 | 14 | | | | | 1 | 0 | 0 | | tank system upgrade | | |
| 89 | 4156 | ME Vet's Home - Augusta | C | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 90 | 4343 | MSAD #35 - Central School | C | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 91 | 4512 | MSAD #57 - Cousens | C | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 92 | 4944 | Sebago Inc. - Westbrook | C | 1 | | | | | | | | | | | 1 | 1 | 3 | 1 | 1 | 3 | | | | | 1 | 0 | 1 | 0 | 61SO replaced, cover etc. | | |
| 93 | 5017 | Middle School - Brewer | C | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 94 | 6248 | McVay's Mobil - Blue Hill | A | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 95 | 7703 | Presque Isle Ind. Park-#1301 | C | 1 | | | | | | | | | | | 1 | 1 | 5 | | | | | | | | 1 | 1 | 0 | | spill bucket cover replaced | | |
| 96 | 8746 | Duratherm Corp-Vasselboro | C | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 97 | 9077 | CFI - State St. Augusta | A | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 98 | 11384 | CFI - Gorham | A | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 99 | 14426 | Rockport Town Garage | B | 1 | | | | | | | | | | | 1 | 0 | | | | | | | | | 0 | | 0 | | spill bucket rusted not fixed | | |
| 100 | 15033 | Blake Library-UM Fort Kent | C | 1 | | | | | | | | | | | 1 | 1 | 4 | | | | | | | | 0 | | 0 | | spill bucket broken cover | | |
| 101 | 17358 | Dead River - Mexico | A | 1 | | | | | | | | | | | | | | 1 | 1 | 1 | | 1 | 1 | 1 | 0 | 0 | 0 | | | | |
| 102 | 18334 | Kens Lobster Wharf-Cundy | A | 1 | | | | | | | | | | | | | | 1 | | | | | 1 | | 0 | | 0 | | float vent not accessible | | |

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| ID # | Reg. # | Facility Name | Facility Use | Problem Obs. | Tank Probe | | | Piping Probe | | | LLD | | | Drop Tube | | | Spill Bucket | | | Overfill Device | | | | Crash Valves | | | CP Tank | | CP Piping | | Comments |
|------|--------|-----------------------------|--------------|--------------|------------|-------|------|--------------|-------|------|-------|-------|------|-----------|-------|------|--------------|-------|------|-----------------|-------|------|------|--------------|-------|------|---------|------|-------------------------------|------|----------|
| | | | | | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Unk. | Prob. | Fixed | Time | Pres | Prob | Pres | Prob | |
| 103 | 19785 | Waldo Co. Health - Belfast | C | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 104 | 883 | B&W Variety-Passadumkg | A | 1 | | | | | | | | | | | | | 1 | 1 | 1 | | | | | | 0 | | 0 | | spill bucket replaced | | |
| 105 | 3537 | Irving - Sherman | A | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 106 | 12160 | Portland Schools-Allan Ave | C | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 107 | 561 | Presque Isle Indoor Pool | C | 1 | 1 | 1 | 7 | | | | | | | | | | | | | 1 | 1 | 7 | | | 0 | | 0 | | tank sensor replaced | | |
| 108 | 3385 | Peak Rehab - Skowhegan | C | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 0 | | | | |
| 109 | 10404 | Otic FCU - Jay | C | 1 | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 0 | | CP failed/no retest | | |
| 110 | 10802 | Julian Burke Residence | C | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 0 | | | | |
| 111 | 10982 | St. Pauls Center-Augusta | C | 1 | | | | | | | | | | | | | 1 | 1 | 1 | | | | | | 1 | 0 | 0 | | spill bucket cleaned | | |
| 112 | 12404 | Hertz Equip. Rental | C | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 0 | | | | |
| 113 | 14569 | United Meth. Chruch-Bruns. | C | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 0 | | | | |
| 114 | 15182 | Getty-Augusta, Civic Center | A | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 0 | | | |
| 115 | 12853 | Hilltop Store - Knox | A | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 116 | 14179 | Wells Jr. High School | C | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 117 | 8704 | Madawaska High School | C | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 0 | | | |
| 118 | 7977 | Clyde Billings - Augusta | C | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | 0 | | 0 | | interstitial sensor replaced | | |
| 119 | 1416 | A&L Airport - Auburn | F | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 120 | 8527 | Brunswick Rec. Center | C | 1 | | | | | | | | | | | | | 1 | 1 | 1 | | | | | | 0 | | 0 | | spill bucket full of water | | |
| 121 | 7883 | MEARNG-Bangor Airport | F | 1 | | | | | | | | | | | | | | | | 1 | 0 | | | | 0 | | 0 | | no overfill protection | | |
| 122 | 965 | WM H Rowe School-Yar. | C | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 123 | 16308 | Yarmouth High School | C | 1 | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 0 | | tank CP failed - not retested | | |
| 124 | 2447 | 7 Eleven - Milford | A | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 125 | 1755 | Youngs Market-Gouldsboro | A | 1 | | | | 1 | 0 | | | | | | | | | | | | | | | | 0 | | 0 | | pipng sump sensor failure | | |
| 126 | 19282 | Harbor Hill Limited | C | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 127 | 5679 | Fairfield School - Saco | C | 1 | | | | | | | | | | | | | 1 | 1 | 1 | | | | | | 1 | 0 | 0 | | spill bucket cleaned | | |

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| ID # | Reg. # | Facility Name | Facility Use | Problem Obs. | Tank Probe | | | Piping Probe | | | LLD | | | Drop Tube | | | Spill Bucket | | | Overfill Device | | | | Crash Valves | | | CP Tank | | CP Piping | | Comments |
|------|--------|-------------------------------|--------------|--------------|------------|-------|------|--------------|-------|------|-------|-------|------|-----------|-------|------|--------------|-------|------|-----------------|-------|------|------|--------------|-------|------|---------|------|---------------------------------|------|----------|
| | | | | | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Unk. | Prob. | Fixed | Time | Pres | Prob | Pres | Prob | |
| 128 | 13286 | Main St. Texaco - P. I. | A | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 129 | 6526 | Maine Potato Growers - P. I. | C | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 0 | | | |
| 130 | 1702 | Veazie Variety | A | 1 | | | | | | | 1 | 1 | 1 | | | | | | | | | | | | 0 | | 0 | | leak detectors replaced | | |
| 131 | 3011 | Augusta Motel | C | 1 | | | | 1 | 0 | | | | | | | | | | 1 | 0 | | | | | 1 | 0 | 0 | | piping sump probe, overfill | | |
| 132 | 12910 | Northeastland Hotel - P.I. | C | 1 | | | | | | | | | | | | 1 | 1 | 1 | | | | | | | 1 | 1 | 0 | 0 | CP Failure | | |
| 133 | 1241 | BIA - City of Bagor | B, C | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 134 | 16732 | Oxford Hill School-Otis Field | C | 1 | 1 | 1 | 1 | | | | | | | | | 1 | 1 | 1 | 1 | | | 1 | | | 1 | 0 | 0 | | tnk snsr/ovrfl unknown | | |
| 135 | 19536 | Oxford Hill School-Cafeteria | C | 1 | 1 | 1 | 1 | | | | | | | | | 1 | 1 | 1 | 1 | | | 1 | | | 1 | 0 | 0 | | tnk snsr rep/ovrfl unknown | | |
| 136 | 8042 | Frank Smimmo-Monmouth | C | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 137 | 9185 | AT&T - Liberty | B | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 0 | | | | |
| 138 | 14504 | Trucker's Int. - Fairfield | A | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 0 | | | | |
| 139 | 15230 | BIW - Croft Bldg. Bath | C | 1 | | | | | | | | | | | | | | | 1 | | | 1 | | | 1 | 0 | 0 | | overfill protection unknown | | |
| 140 | 18957 | Hall Dale High - Hallowell | C | 1 | 1 | 0 | | | | | | | | | | | | | | | | | | | 0 | | 0 | | Interstitial probe unit failure | | |
| 141 | 528 | Abbie Fowler School-Sang. | C | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 142 | 19721 | MBNA Fleet Bldg. - Belfast | E | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 143 | 19140 | MBNA - Camden | C | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 144 | 4530 | Don's Market - Hollis | A | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 145 | 3647 | Houlton Inter. Airport | F | 1 | 1 | 0 | | 1 | 0 | | | | | | | | | | 1 | 0 | | | | | 0 | | 0 | | sensors failed, overfill unk. | | |
| 146 | 8624 | Bangor School-Vine Street | C | 1 | | | | 1 | 1 | 13 | | | | | | | | | | | | | | | 0 | | 0 | | sump probe replaced | | |
| 147 | 2304 | Pike Industries - Wells | C | 1 | | | | | | | | | | | | 1 | 1 | 1 | | | | | | | 0 | | 0 | | spill bucket cleaned | | |
| 148 | 83 | Gateway Elementary-VB | C | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 149 | 19886 | Route 126 Citgo-Litchfield | A | 1 | | | | | | | 1 | 1 | 3 | | | | | | | | | | | | 0 | | 0 | | line leak detector replaced | | |
| 150 | 12965 | Mech. Trades Building-P.I. | C, E | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 151 | 13064 | Thomas Mem. Lib.-Cape Liz | C | 0 | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | | | |
| 152 | 15507 | Carl Lamb School-Sanford | C | 1 | 1 | 1 | 1 | | | | | | | | | 1 | 1 | 1 | | | | | | | 0 | | 0 | | tank sensor replaced | | |
| 153 | 1925 | Madison Library - Madison | C | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 0 | | | | |

AnnualIn.xls

| ID # | Reg. # | Facility Name | Facility Use | Problem Obs. | Tank Probe | | | Piping Probe | | | LLD | | | Drop Tube | | | Spill Bucket | | | Overfill Device | | | | Crash Valves | | | CP Tank | | CP Piping | | Comments |
|------|--------|-----------------------------|--------------|--------------|------------|-------|------|--------------|-------|------|-------|-------|------|-----------|-------|------|--------------|-------|------|-----------------|-------|------|------|--------------|-------|------|---------|------|-----------|------|-------------------------------|
| | | | | | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Unk. | Prob. | Fixed | Time | Pres | Prob | Pres | Prob | |
| 154 | 15104 | Boothbay Harbor School | C | 0 | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 0 | |
| 155 | 15347 | Karen's Variety - Windham | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 1 | 0 | |
| 156 | 2047 | York Village School | C | 1 | 1 | 1 | 1 | | | | | | | | | | 1 | 1 | 1 | | | | | | | | 0 | | 0 | | tank sensor replaced |
| 157 | 480 | Chick's Marina-Kennebunkp | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 158 | 5776 | Marsh Isl. Apart.-Old Town | C | 0 | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 0 | | |
| 159 | 12250 | 4 Corners Store-Rumford | A | 1 | 1 | 0 | | | | | | | | | | | | | | | | | | 1 | 0 | | 1 | 1 | 0 | | tank sensor/disp. not anch. |
| 160 | 14688 | UPS - Rockland | B | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 161 | 7067 | Walton School - Auburn | C | 1 | | | | | | | | | | | | | 1 | 1 | 1 | 1 | 0 | | | | | | 0 | | 0 | | no overfill protection |
| 162 | 7431 | Sherwood Heights-Auburn | C | 1 | 1 | 0 | | 1 | 0 | | | | | | | | | | | 1 | 0 | | | | | | 0 | | 0 | | tank/piping sens. no ovrf pro |
| 163 | 4608 | Avis - Portland Jetport | B | 1 | 1 | 0 | | 1 | 0 | | 1 | 0 | | | | | | | | | | | | | | | 0 | | 0 | | sensors not accessible |
| 164 | 19546 | Loring Comm Center-7220 | C | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 165 | 20063 | Loring Comm Center-8420 | C | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 166 | 20073 | Loring Comm Center-8260 | C | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 167 | 18762 | Steamboat Exxon-Winterprt | A | 1 | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 0 | | 0 | | leak detector failure |
| 168 | 644 | Depot Store - Unity | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 169 | 5147 | Atkinson Elem. School | C | 1 | | | | | | | | | | | | | | | | 1 | | | 1 | | | | 1 | 1 | 1 | 1 | cp system failed, no retest |
| 170 | 4798 | School Bus Garage-Milo | B | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 171 | 3905 | Pomerleau's - Augusta | C | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 172 | 5522 | Preble Residence-Madison | C | 0 | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 0 | | |
| 173 | 9929 | Longfellow's Green-Manch | C | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 174 | 19252 | Rockland Ferry Terminal | C | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 175 | 4428 | ME Turnpike - Auburn | C | 1 | | | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 3 | | | | | 0 | | 0 | | spill bucket & overfill |
| 176 | 5954 | AE Flewelling-Ft. Fairfield | C | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 177 | 10342 | Joel Ploszaj - Dexter | C | 0 | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 0 | | |
| 178 | 19649 | Burkettville General Store | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |

| ID # | Reg. # | Facility Name | Facility Use | Problem Obs. | Tank Probe | | | Piping Probe | | | LLD | | | Drop Tube | | | Spill Bucket | | | Overfill Device | | | | Crash Valves | | | CP Tank | | CP Piping | | Comments |
|------|--------|----------------------------|--------------|--------------|------------|-------|------|--------------|-------|------|-------|-------|------|-----------|-------|------|--------------|-------|------|-----------------|-------|------|------|--------------|-------|------|---------|------|-----------|------|--------------------------------|
| | | | | | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Unk. | Prob. | Fixed | Time | Pres | Prob | Pres | Prob | |
| 179 | 9115 | NE Telephone-Houlton | B | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 180 | 1652 | Black Bear - Springvale | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 0 | | |
| 181 | 2205 | Village Store - Woodstock | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 182 | 2937 | Grimmel's Gas Up-Lewiston | A | 1 | | | | | | | 1 | 1 | 3 | | | | | | | | | | | | | | 0 | | 0 | | leak detector replaced |
| 183 | 3735 | Getty - Auburn | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 184 | 6853 | Lewiston Central Office | B | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 185 | 8394 | Guilford Central Office | B | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 186 | 8561 | Evergreen Trading LL-Mada | C | 1 | 1 | 0 | | | | | | | | | | | 1 | 0 | | | | | | | | | 1 | 0 | 0 | | no leak detection/spill bucket |
| 187 | 8777 | Belfast Central Office | B | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 188 | 10871 | Oxford Central Office | B | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 189 | 12661 | Scarborough Central Off. | B | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 190 | 18518 | Dixfield Central Office | B | 1 | | | | | | | | | | | | | | | | 1 | 0 | | | | | | 0 | | 0 | | facility has no overfill prot. |
| | | Total Sites: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | No Reported Problem Sites: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Problem Sites: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Sites with this problem: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 55 | 16 | 10 | | 8 | 3 | | 9 | 7 | | 1 | 1 | | 19 | 17 | | 22 | 8 | | 7 | 2 | 1 | | 52 | 8 | 15 | 2 | |

Appendix B

Detailed Summary of Each Type of Problem Discovered

Detailed Summary of Each Type of Problem Discovered

Overfill Device

Overfill devices are designed to prevent the tank from being filled beyond its capacity during a delivery. Overfill devices were replaced or repaired at eight facilities. There were no overfill devices at five facilities. The presence of an overfill device could not be verified at seven facilities. These seven facilities are listed in the “unknown” column of the spreadsheet, and are treated as a problem that was not remedied in calculating the statistics for this study. One overfill device could not be tested. Of the 22 problems identified with overfill devices, only eight (36%) were remedied.

Spill Bucket (Spill Containment Manhole)

Spill containment manholes are intended to capture small spills that may occur when the delivery hose is disconnected from the tank fill pipe. Unspecified problems were discovered at nine facilities, but most of these probably involved excessive water, product or dirt in the manhole. Four spill containment manholes were cleaned out, three had covers replaced, two were replaced entirely, and one was reported to be rusted out but was not replaced. Of the 19 problems identified with spill containment manholes, 17 (89%) were remedied.

Tank Probe

The tank probe is a leak detection sensor that indicates whether a double walled storage tank is experiencing a possible leak. Malfunctioning probes were identified at 16 facilities. One facility had no leak detection on the tanks and at one facility the leak detection probe could not be accessed. Of the 16 problems identified, 10 (62%) were remedied.

LLD (Line Leak Detector)

The line leak detector is a device that detects major leaks in pressurized pumping systems. A problem is indicated if the device fails to detect a simulated 3 gallon per hour leak. Of the 9 problems identified, 7 (78%) were remedied.

Tank CP (Cathodic Protection)

Steel tanks are required to have cathodic protection to provide protection against corrosion. Cathodic protection problems are identified when voltage measurements indicate that the tank fails to meet accepted criteria for cathodic protection. Current DEP guidance on what to do when a tank fails a CP test is to retest the tank at a later date. Because the retest may occur many months after the initial test, this study did not track whether problems with cathodic protection were repaired. Cathodically protected tanks were present at 52 facilities. Eight problems with tank cathodic protection were identified.

Piping Probe

The piping probe is a leak detection sensor that indicates whether a double walled piping system is experiencing a possible leak. Malfunctioning probes were identified at 8

facilities. At one facility the leak detection probe could not be accessed. Of the eight problems identified, three (38%) were remedied.

Piping CP (Cathodic Protection)

Buried steel piping containing petroleum is required to have cathodic protection to provide protection against corrosion. Cathodic protection problems are identified when voltage measurements indicate that the piping fails to meet accepted criteria for cathodic protection. Current DEP guidance on what to do when piping fails a CP test is to retest the tank at a later date. Because the retest may occur many months after the initial test, this study did not track whether problems with cathodic protection were repaired. Cathodically protected piping was present at 15 facilities. Two problems with piping cathodic protection were identified.

Crash Valves (also known as impact valves or emergency shut-off valves)

Crash valves are installed at the base of dispensers equipped with pressurized pumps to automatically shut-off the flow of fuel to the dispenser in case of fire or substantial impact to the dispenser. Most problems associated with crash valves are due to improper anchoring of the valve to the dispenser island. Of the two crash valve problems identified, one (50%) was remedied.

Drop Tube

The drop tube is an extension of the fill pipe that reduces vapor emissions in gasoline tanks. Some overfill devices are incorporated into drop tubes, so drop tubes are sometimes installed in heating oil or diesel tanks. Only one problem involving drop tubes was documented in the annual inspections, and it was remedied.

Appendix C

Addendum to Annual Inspection Study

Background

As part of the annual inspection study, the DEP obtained 29 facility inspection reports completed in 1999 from a single owner. All of these facilities were retail motor fuel outlets with valid inspections that were voluntarily submitted. All of the inspections were conducted by a single inspector.

Because these reports were from a single owner and not randomly selected, they represent a different UST system population. The DEP decided to analyze the 29 reports from a single owner and then compare these results to the results from the random sample of facilities.

Purpose

Because the single owner facilities are inspected annually and any problems identified are promptly corrected, a review of the 1999 inspection reports would give some indication of the number and type of problems that can crop up in a one year time frame.

A secondary purpose was to compare the data from the single owner population to the random sample population to see what differences or similarities might become apparent.

Methodology

The single owner reports were reviewed and the data entered into a spreadsheet, just as for the main portion of the study. This spreadsheet is presented at the end of this appendix. Data from the spreadsheet were tallied and are graphically presented in Figures C-1 and C-2.

Because there are significant differences between motor fuel and non-motor fuel facilities, the motor fuel storage systems found in the random sample were separated out so that the data from the single owner and the random sample facilities could be directly compared. There was one facility present in both the single owner and the random sample populations. This facility was arbitrarily assigned to the single owner population. There were 70 unique motor fuel facilities represented in the random sample population.

Figure C-1. What Percentage of 1999 Annual Inspections From a Single Owner Discovered Problems?

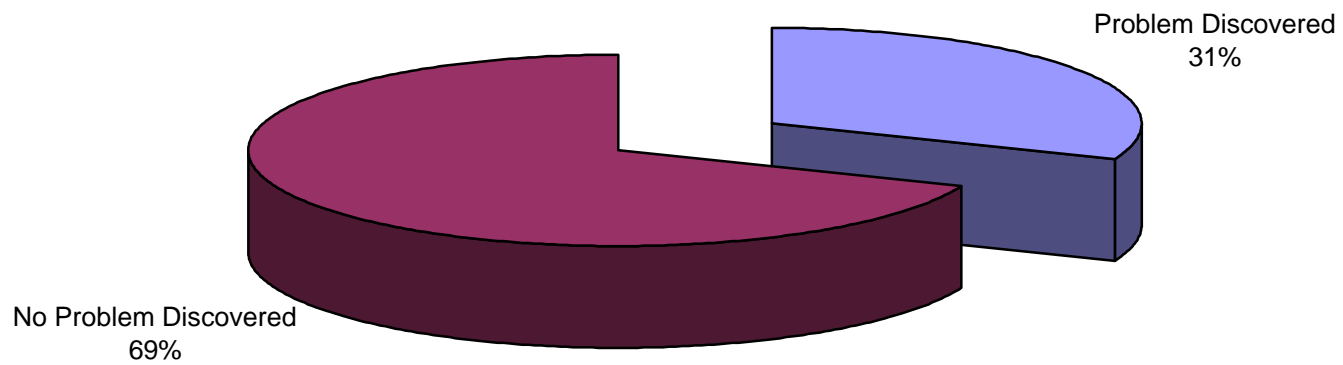


Figure C-1. What Percentage of 1999 Annual Inspections from a Single Owner Discovered Problems?

| | Single Owner Sample (29 facilities) | | Random Sample (70 facilities) | |
|-----------------------|--|---------|----------------------------------|---------|
| | Number | Percent | Number | Percent |
| Problem discovered | 9 | 31 | 13 | 19 |
| No problem discovered | 20 | 69 | 57 | 81 |
| TOTAL | 29 | 100 | 70 | 100 |

Of the 29 annual inspection reports from a single owner reviewed, nine (31%) discovered problems with the facility. Of the 70 motor fuel facilities included in the larger study sample, 13 (19%) reported problems. There are a number of possible reasons for the difference in the number of problems reported in the two sample populations, including small sample size, failure to report problems that were corrected during the inspection in the larger study sample, and differences in the hardware or operating characteristics of the facilities themselves. With the data at hand, however, it is not possible to explain the differences in the number of problems discovered in the two sample populations.

NOTE: The person conducting the annual inspections for the single owner facilities was instructed to record all problems discovered, whether or not they were included in the DEP's annual inspection checklist. As a result, some 14 additional problems were discovered, including corroded electrical fittings, riser pipes that were too close to grade, missing vent caps, worn out dispensing hoses, improperly programmed equipment and flexible connectors not protected against corrosion. These problems were not included in Figures C-1 and C-2 because they were not recorded in the 1999 random sample of inspection reports. If these problems are included in the single owner statistics, then 14 facilities (48%) had a total of 27 problems identified.

Figure C-2. What Kinds of Problems Were Discovered During Single Owner Annual Inspections in 1999?

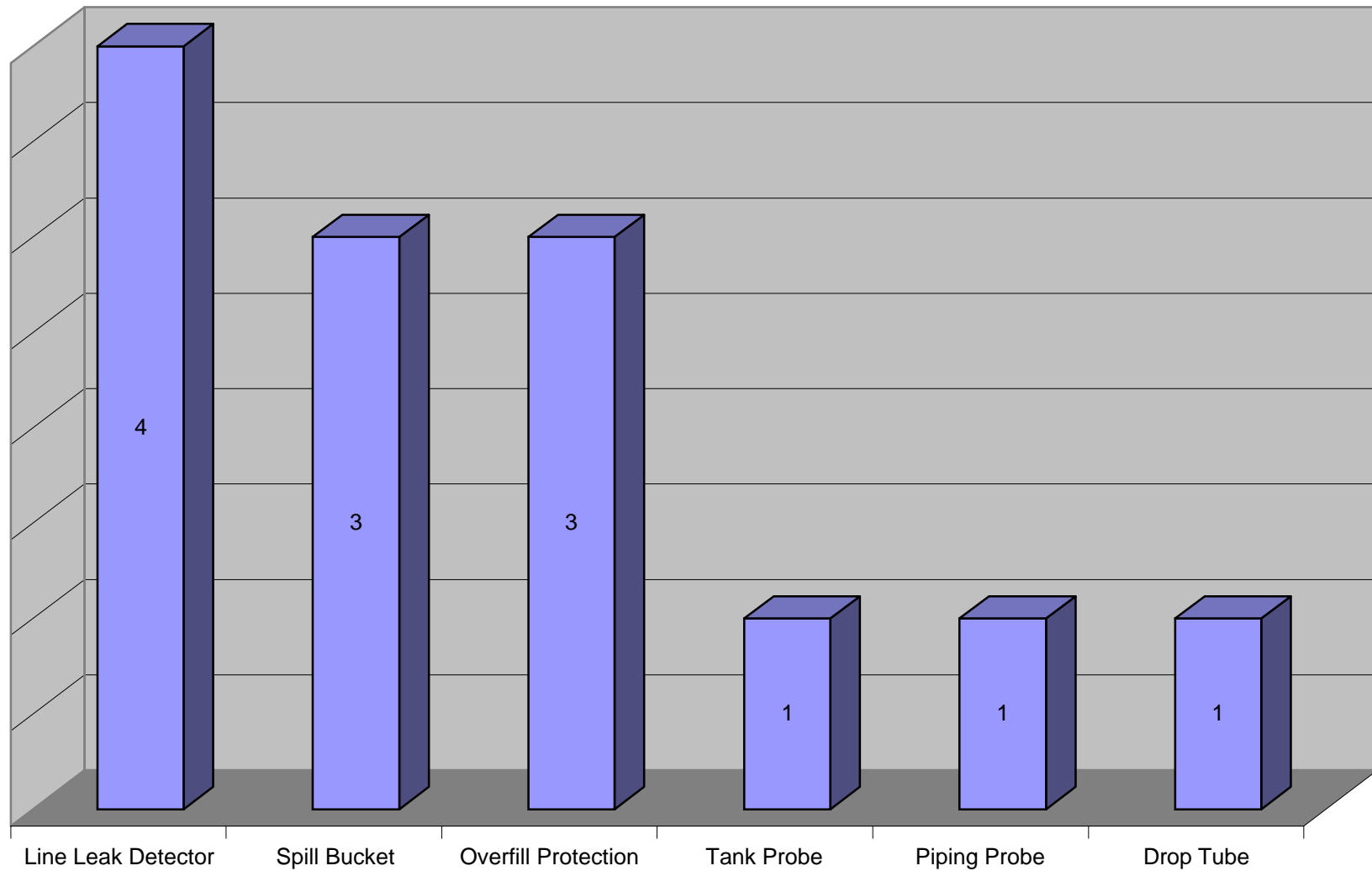


Figure C-2. What Kinds of Problems Were Discovered During Single Owner Annual Inspections in 1999?

| Type of Problem | Single Owner Sample (29 facilities) | | Random Sample (70 facilities) | |
|-----------------------------|--|--------------------------------------|-------------------------------------|--------------------------------------|
| | Number of Problems Discovered | Percent of Problems Discovered | Number of Problems Discovered | Percent of Problems Discovered |
| Line leak detector | 4 | 30 | 8 | 50 |
| Spill bucket | 3 | 23 | 1 | 6 |
| Overfill device | 3 | 23 | 2 | 13 |
| Tank leak detection probe | 1 | 8 | 1 | 6 |
| Piping leak detection probe | 1 | 8 | 1 | 6 |
| Tank cathodic protection | 0 | 0 | 1 | 6 |
| Drop tube | 1 | 8 | 0 | 0 |
| Crash Valve | 0 | 0 | 2 | 13 |
| TOTAL | 13 | 100 | 16 | 100 |

A total of 12 separate problems were discovered at the nine single owner facilities where problems were found. A total of 16 separate problems were discovered at the 13 motor fuel facilities included in the 1999 sample of annual inspection reports. Because of the small sample size, not much can be said about the types of problems discovered except that they are generally similar. Line leak detectors do appear to have a high problem rate.

Note: This table and chart tabulate only those problems that are listed in the DEP's annual inspection report form. Additional problems not listed on the DEP checklist were discovered during the single owner inspections. Refer to Figure C-1 and the spreadsheet at the end of this Appendix for further details.

Results

- ! The single owner sample population is known to be inspected on an annual basis. In addition, problems are addressed within a short time of discovery. The significant number of problems discovered on an annual basis indicates that many problems can arise in twelve months time.
- ! The person conducting the annual inspections for the single owner facilities was instructed to record all problems discovered, whether or not they were included in the DEP's annual inspection checklist. As a result, some 14 additional problems were discovered, including corroded electrical fittings, riser pipes that were too close to grade, missing vent caps, worn out dispensing hoses, improperly programmed equipment and flexible connectors not protected against corrosion. If these problems are included in the single owner statistics, then 14 facilities (48%) had a total of 27 problems identified.
- ! The single owner sample of 29 annual inspection reports contained a higher percentage of facilities where problems were discovered than the 70 motor fuel facilities included in the wider random sample of 1999 annual inspection reports. Possible reasons for this include the small sample size, failure to report problems that were corrected during the inspection in the larger study sample, and differences in the hardware or operating characteristics of the facilities themselves.
- ! If only the types of problems included in the DEP inspection checklist are compared, the two sample populations had generally similar problems. Line leak detectors are the most common problem observed in both of the sample populations. However, the more thorough inspections conducted for the single owner facilities uncovered eleven additional problems in areas not covered by the DEP checklist.

Discussion

Both the single owner and the larger random sample of 1999 annual inspection reports indicate that significant numbers of problems are discovered during annual inspections. Many of these problems would seriously compromise the effectiveness of the spill prevention and leak detection mechanisms installed on the storage systems. In addition, the single owner inspection reports documented a significant number of problems in areas not covered by the DEP inspection checklist.

Because the single owner inspections were submitted by a conscientious storage system owner who conducts inspections annually and repairs problems promptly, it is evident that problems develop continuously over time. Periodic inspections are necessary to keep spill prevention and leak detection equipment operating effectively. An annual inspection program can play a significant role in minimizing spills and leaks from underground storage systems.

Recommendations

- ! The annual inspection program should be continued and every effort made to improve its effectiveness. By helping to ensure that Maine's underground storage systems are operating properly, the DEP's annual inspection program plays an important role in protecting human health and the environment.
- ! The scope of the annual inspection should be broadened to include areas such as leak detection equipment programming, corrosion protection of product piping components, condition of electrical fittings, and any other readily identifiable conditions that might adversely affect the integrity of the storage system or the effectiveness of leak detection in the long or short term.

Single Owner Spreadsheet

| ID # | Facility Use | Problem Obs. | Tank Probe | | | Piping Probe | | | LLD | | | Drop Tube | | | Spill Bucket | | | Overfill Device | | | | Crash Valves | | | CP Tank | | CP Piping | | Comments |
|------|--------------|--------------|------------|-------|------|--------------|-------|------|-------|-------|------|-----------|-------|------|--------------|-------|------|-----------------|-------|------|------|--------------|-------|------|---------|------|-----------|------|--|
| | | | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Unk. | Prob. | Fixed | Time | Pres | Prob | Pres | Prob | |
| 1001 | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 1002 | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 1003 | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 1004 | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | No CP on flex connect; replace diesel hose |
| 1005 | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 1006 | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 1007 | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | LD programming not right; electrical fittings corroded |
| 1008 | A | 1 | | | | | | | 1 | 1 | 1 | | | | | | | | | | | | | | 0 | | 0 | | Replaced LLD |
| 1009 | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 1010 | A | 1 | | | | | | | | | | | | | | | | 1 | 1 | 1 | | | | | 0 | | 0 | | Overfill protection added; no Cp on flex connect; VR caps too high |
| 1011 | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | No CP on flex connect; dispensers not anchored |
| 1012 | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 1013 | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 1014 | A | 1 | | | | | | | 1 | 1 | 1 | | | | 1 | 1 | 1 | | | | | | | | 0 | | 0 | | LLD replaced; spill bucket cleaned |
| 1015 | A | 1 | | | | | | | | | | | | | 1 | 1 | 1 | | | | | | | | 0 | | 0 | | Spill bucket cover replaced |
| 1016 | A | 1 | 1 | 1 | 1 | | | | | | | | | | | | | 1 | 1 | 1 | | | | | 0 | | 0 | | Tank monitoring repaired; overfill at wrong height |
| 1017 | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 1018 | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 1019 | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 1020 | A | 1 | | | | 1 | 1 | 1 | | | | | | | | | | | | | | | | | 0 | | 0 | | Sump sensors replaced; electrical fittings corroded |
| 1021 | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | No CP of flex connect; no vapor vent caps |
| 1022 | A | 1 | | | | | | | | | | | | | 1 | 1 | 1 | | | | | | | | 0 | | 0 | | Spill bucket cover replaced; VR cover too high |
| 1023 | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 1024 | A | 1 | | | | | | | 1 | 1 | 1 | | | | | | | | | | | | | | 0 | | 0 | | LLD replaced |
| 1025 | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |

Single Owner Spreadsheet

| ID # | Facility Use | Problem Obs. | Tank Probe | | | Piping Probe | | | LLD | | | Drop Tube | | | Spill Bucket | | | Overfill Device | | | | Crash Valves | | | CP Tank | | CP Piping | | Comments |
|--------------------------|--------------|--------------|------------|-------|------|--------------|-------|------|-------|-------|------|-----------|-------|------|--------------|-------|------|-----------------|-------|------|------|--------------|-------|------|---------|------|-----------|------|---|
| | | | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Prob. | Fixed | Time | Unk. | Prob. | Fixed | Time | Pres | Prob | Pres | Prob | |
| 1026 | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | ATG programming not right |
| 1027 | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| 1028 | A | 1 | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | | | | 1 | 1 | 1 | | | | | 0 | | 0 | | ELLD console problem; no CP on flex connect |
| 1029 | A | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | | 0 | | |
| Total Sites: | | 29 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No Problem Sites | | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Problem Sites | | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sites With This Problem: | | | 1 | 1 | | 1 | 1 | | 4 | 4 | | 1 | 1 | | 3 | 3 | | 3 | 3 | | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | |

Appendix D

Summary of Compliance Rates by Facility Type

Facility Types Represented in the Random Sample Study Together with Their Compliance/Non Compliance Rates

| Facility Type | Number in Study | Percent in Study | Number Did Inspect | Percent Did Inspect | Number Did NOT Inspect | Percent Did NOT Inspect |
|--------------------|-----------------|------------------|--------------------|---------------------|------------------------|-------------------------|
| Single Residence | 9 | 3 | 4 | 44 | 5 | 56 |
| Farm | 2 | .8 | 1 | 50 | 1 | 50 |
| Public | 15 | 6 | 8 | 53 | 7 | 47 |
| Multiple Residence | 7 | 3 | 4 | 57 | 3 | 43 |
| Retail | 104 | 40 | 73 | 70 | 31 | 30 |
| Federal | 7 | 3 | 5 | 71 | 2 | 29 |
| Industrial | 9 | 3 | 7 | 78 | 2 | 22 |
| Commercial | 47 | 18 | 37 | 79 | 10 | 21 |
| Town/School | 47 | 18 | 38 | 81 | 9 | 19 |
| State | 14 | 5 | 12 | 86 | 2 | 14 |
| Wholesale | 1 | .4 | 1 | 100 | 0 | 0 |
| All Facilities | 262 | | 190 | 73 | 72 | 27 |

This table shows the breakdown of facility types included in the random sample study, together with the number and percent of each facility type that did and did not have a valid annual inspection report.